CONTRACT BUNDLING AND PUBLIC POLICY: A CASE STUDY
IN ACQUISITION OF GOODS AND SERVICES BY
THE U.S. GOVERNMENT

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Abstract

This paper examines the central role of case study methods in the author's 2006 doctoral dissertation, which challenged the conclusions of prior U.S. Government studies on the frequency and effect on small businesses of the procurement practice of contract bundling. The dissertation used qualitative methods to develop and support its thesis that the government had materially overstated the frequency and effect of the practice of bundling. Its findings contradicted the prevailing view that contract bundling is widespread and growing; the dissertation concluded that bundling is an insignificant public policy and business strategy concern. This paper describes how the application of case study methods guided the research design and influenced the findings and conclusions of the dissertation.

KEY WORDS: Contract bundling, government procurement, small business, public policy, case study, grounded theory, qualitative methods

INTRODUCTION

Contract bundling is a specific procurement practice by which U.S. Government agencies combine disparate requirements for goods and services that were previously purchased separately from small businesses into a single contract that is unsuitable for small business due to its size, complexity, or geographic dispersion [Federal Register §13 CFR Part 125].

Public policy experts, small business advocates, industry representatives, and government officials broadly agree that contract bundling is the number one barrier to small business participation in the government contracting marketplace [Styles, 2003]. Contract bundling was identified as the cause for a 56% decline in the number of small businesses participating in government contracting during the 1990s, a proportion representing nearly 15,000 firms.

In the U.S. Small Business Administration's definitive 2002 report produced under contract by Eagle Eye Publishers [2002] entitled "Impact of Contract Bundling on Small Business 1992-2001" the government estimated that 34,221 new bundled contracts had been awarded over the 10-year period of study, transferring $840 billion of revenue from small to large firms. These statistics are universally accepted and widely quoted by public policy makers and business leaders; their publishing led to special U.S. Senate hearings into the issue of bundling in 2003 [Snowe, 2003].

During the process of developing the Nerenz [2006] doctoral dissertation the theory was developed that these estimates were materially overstated. Discrepancies were detected between government reports of different agencies regarding the estimated frequency of the practice; differences were attributed to the underlying poor data quality of a database of contract action records upon which quantitative studies were based [U.S. Government Accountability Office, 2004]. Nerenz [2006] dissertation sought to
develop a new source of information on the practice of bundling that could be used to test the validity of the governments' bundling statistics.

During the literature review of the dissertation, transcripts from a 1998 congressional hearing [Hayes, 1999] established that only a handful of bundling actions were being approved by the U.S. Small Business Administration each year, as required by statutes and agency guidance. The SBA had estimated over 3,000 new bundled contracts to have been issued in 1998 [Eagle Eye Publishers, 2002], meaning that nearly all of them would have been improperly written and technically illegal.

From the author's experience as a small business executive, it was known that improper actions of the government during a contracting action are subject to appeal via a legal process known as a bid protest filed with the U.S. Government Accountability Office. As a subject matter expert in this specific area, the author was reasonably confident that each act of improper bundling would have been successfully appealed by the small businesses adversely affected by the government's actions.

The dissertation proposed to test the validity of the government's statistical estimates of bundling frequency [Eagle Eye Publishers, 2002] by comparing them to the numbers of bid protests filed by the businesses directly affected. Bid protest cases filed with the U.S. Government Accountability Office from 1992-2004 were examined, identifying and cataloguing those where contract bundling was a primary or secondary pleading in the case, and then comparing the annual numbers of reported bundling cases to the numbers estimated by the government.

The central finding of the research was both significant and unexpected. From 1992-2001, the period for which the SBA estimated 34,221 new bundled contracts were awarded, only 18 bid protests were filed by small business victimized by the practice.

The research design contained other elements that developed the arguments for acceptance of its central finding and for rejection of the conclusions of the government's prior bundling studies, but it is not necessary to describe the entire dissertation in order to illustrate the impact of choice of methodologies on the conclusions reached in research on the subject.

Using quantitative methods, the government concluded that contract bundling is rampant and growing. Using qualitative methods -- specifically the analysis of bid protest cases -- the Nerenz [2006] dissertation concluded contract bundling is rare and insignificant. The gap between the 34,221 bundling actions estimated by the government through quantitative methods and the 18 actual cases reported by contractors is too large to be reconciled; one must be rejected for the other to be accepted. The problem is: which should be accepted and which rejected?

**METHODOLOGY**

There is no disputing that each act of contract bundling is harmful to the small businesses that lose their contracts and revenue; the central question is how frequently the practice occurs that makes it a significant (or not) public policy and business strategy issue. Determining the frequency and effect of the practice is an important research subject, and the selection of methodological approaches is therefore a vital research consideration.

**COUNTING BUNDLING ACTS**

A bid protest is a legal proceeding; based upon direct knowledge of a specific action of the government, a subject matter expert (the business executive) files an appeal to the U.S. Government Accountability Office (GAO), seeking remediation [Dabkin & Thia, 2003]. An investigation is conducted by a qualified fact-finder and the case is adjudicated with a written decision that documents the claims, facts, evidence, and decision to either sustain or deny the protest.

Each bid protest is a case study - a specific procurement action taken by the government is examined and reported upon by subject matter experts. After analysis of the facts and evidence, an arbitrator reaches a conclusion and renders a written decision. A key methodological assumption made in the Nerenz [2006] dissertation was that all or nearly all contract bundling actions would be appealed by the businesses directly impacted, so that counting the number of bid protest cases would provide a reasonable approximation of the number of actual contract bundling actions undertaken by the government.
Using a keyword search protocol reviewed by the GAO webmaster for suitability, the author retrieved bid protest case digests that contained the phrase “contract bundling” and its derivatives from a digital archive of cases maintained for public access. After verification testing, the search was narrowed to retrieve only cases from 1992-2004, the period of interest for the research.

The case files retrieved from the search protocol were examined individually to identify only qualified cases where contract bundling was a primary or secondary pleading – i.e. a central reason for filing the complaint. Duplicate files (multiple document formats) were expunged, as were case files in which the term bundling was used in an irrelevant context – an example would be a protest over the size of a bundle of items in a packaging specification.

Thus, a population of unique bid protest case files was established for the purposes of quantifying the number of bid protests registered over the practice for each year from 1992-2004. The cases were stored digitally to be available for subsequent analysis and secondary review if needed.

COMPARING DATA SETS

Since a bid protest would be most likely to be filed when a new contract is awarded, the SBA’s estimated numbers of new bundled contracts as stated in the report entitled “Impact of Contract Bundling on Small Business 1992-2001” [Eagle Eye Publishers, 2002] were selected as the most meaningful data set for verification by analysis of bid protest volume.

The comparison of estimated bundling actions and number reported via the bid protest process was presented as a table matching annual volumes for each year from 1992-2001. In addition to the simple gap computation – number of bid protests divided by number estimated over the 10-year period – three correlation tests were performed to identify any statistically significant relationships that might exist between the two data sets. These were a) the correlation coefficient, b) the correlation coefficient using the square root of the dependent variable (bid protests), and c) a Pearson’s rank coefficient.

To test the broader industry perceptions about contract bundling being the most significant small business issue in government contracting, the proportion of bid protests that contract bundling protests made up was computed. Keyword searches on 14 other grounds for protests were performed and the results ranked by volume to determine a relative position for contract bundling among expected other grounds.

VALIDITY MEASURES

Because the research was undertaken in fulfillment of dissertation requirement for a doctoral degree from Northcentral University, the processes of research design, concept development, proposal development, and dissertation approval were each subjected to review by a qualified dissertation committee, a research professor, and the department chair.

In addition, the search protocol employed to select relevant bid protest cases and the integrity of the underlying digital database were reviewed and verified by the GAO webmaster for legal products. To insure that there was not an alternative venue for the disposition of bid protests related to contract bundling, keyword search strings were performed against likely alternative venues – agency ombudsman offices, U.S. Army Material Command, federal district courts, etc.

SECONDARY ANALYSIS OF PRIOR STUDIES

Based upon preliminary research results, the scope of the research was expanded to include an examination of the methodologies of the U.S. Small Business Administration’s (SBA) seminal study on contract bundling entitled “Impact of Contract Bundling on Small Business 1992-2001” [Eagle Eye Publishers, 2002]. The analysis was focused on the selection criteria used by the SBA study and its potential for improper inclusion of contracts into a population from which statistical estimates were developed.

The analysis of selection methodology also included a single case study of the author’s employer’s history of small business contracts with the federal government. Theories developed during analysis of the SBA selection criteria were tested via the single case study of Oldenburg Group Incorporated. In this case study, the 39 prime government contracts from 1990-2005 which Oldenburg bid and either won or
lost to a known competitor were examined. The dissertation developed a theory that the SBA selection criteria could produce a rate of bundled contract misidentification of over 90%.

FINDINGS

The central finding of the dissertation was that 25 bid protests were filed over the practice of contract bundling with the U.S. Government Accountability Office from 1992-2004. 18 (of the 25) were filed from 1992-2001, the period for which the SBA estimated 34,221 new bundled contracts were awarded.

Contract bundling bid protests made up 0.158% of bid protests filed over the last 10 years of the study period, 1995-2004. Of the 15 grounds tested for volume of protests filed, contract bundling ranked 15th.

Analysis of the prior SBA study [Eagle Eye Publishers, 2002] selection criteria found that none of the key elements of the statutory definition of the practice of contract bundling were included in the selection criteria. These elements are unsuitability for small business, previous procurement under separate contracts, and a dollar threshold of $10 million. Conversely, none of the key elements of the selection criteria were found in the definition of the practice of bundling; these elements are changes in product codes, multiple places of performance, and a dollar threshold of $1 million.

Applying the selection criteria to the contracts observed in the single case study of Oldenburg Incorporated resulted in a 100% error rate. All 39 out of 39 prime contracts examined in the case study met the selection criteria used in the SBA studies [Eagle Eye Publishers, 2002] to identify bundled contracts when none was, in fact, bundled.

The contracts reviewed in the case study exhibited multiple place of performance, or multiple product and service codes, and many were over the $1 million presumptive threshold for bundled contract identification. However, none were previously purchased separately and all were won by a small business, either Oldenburg or a competitor, and therefore not unsuitable for small business; the statutory definition of contract bundling requires that the bundled requirements be previously purchased under separate contracts, and that the combined contract be unsuitable for a small business – i.e. awarded to a large business.

DISCUSSION

The findings of Nerenz [2006] raised several difficult questions for the prevailing belief that contract bundling was rampant and decimating the small business community. If there were indeed tens of thousands of improper acts putting tens of thousands of small businesses under, why would there be only a handful of appeals filed by the affected businesses?

Perhaps a more important question is why would government officials act improperly in the first place, and why have none been prosecuted for illegally bundling contracts? Why would these behavioral anomalies only be manifested in the practice of bundling, and not in other contracting practices?

To those who would defend the conventional beliefs, the Nerenz [2006] dissertation added a difficult anthropological dimension to the issue – creating a need to develop complex theories to explain these and other behavior anomalies which would be required of contracting officials and small business owners in order for the prior studies’ estimates of frequency to be reflective of actual practice.

The dissertation concluded that no such theory building was necessary; it proposed that the estimates of prior studies were overstated due to flawed selection criteria and limitations of the quantitative methodology used. The absence of bid protest cases was most easily explained by the lack of contract bundling actions to be protested.

QUANTITATIVE or QUALITATIVE

At its core, the discontinuity between the two alternative understandings of contract bundling is a contest of methodologies – the SBA used quantitative methods to develop its understanding, and Nerenz [2006] relied on qualitative methods to develop its alternative.

Each bid protest is a case study of a specific procurement action and its impact on a specific business. As with any legal process, definitions of terms are strictly adhered to, and appeals must be grounded on a procedural improperly, not merely disagreements with the legitimate judgments of a contracting official. The arbitrator deciding the bid protest must establish first that the act of contract
bundling -- a specific act defined by statute -- did indeed take place. This is a qualitative judgment reached by comparing the facts in evidence against an applicable statute and body of case law.

The Nerenz dissertation formed its understanding of contract bundling frequency significance as a public policy and small business issue upon the number of these cases that have been filed. Its key assumptions are that the business executive directly affected by each act of bundling would a) know that an act of bundling had occurred and b) would take action to appeal it rather than accept failure of the firm.

By contrast, the 2002 SBA study [Eagle Eye Publishers, 2002] developed its conclusions through statistical analysis of a database of contract action records – the Federal Procurement Data System (FPDS). A computer program scanned for changes in field code values for contract records over time based upon criteria established in the study’s selection protocol.

Contracts exhibiting these changes were tagged as bundled and included in a population against which a number of statistical analyses were later performed to. Its key assumptions are that a) its selection protocol would accurately identify bundled contracts, and b) that the patterns of changes in field code values used to tag bundled contracts were indeed caused by the practice of contract bundling.

The two studies count fundamentally different things: Nerenz [2006] counts the number of actual bundling actions affirmatively identified contemporaneously by direct observation of subject matter experts using qualitative methods. The SBA study [Eagle Eye Publishers, 2002] selected contracts inferred to be bundled from changes in field code values of a database of contract records, then uses quantitative analysis to quantify trends in bundling activity over time.

It should be noted that the results of four other qualitative analyses identified in the literature produced findings of contract bundling frequency consistent with Nerenz [2006]. For example, a GAO audit of contracts in 2002 found only 24 new bundled contracts to have been awarded [U.S. Government Accountability Office, 2004), and the 2003 Congressional testimony of a Department of Defense official reported that agency had issued three bundled contracts in the previous year [Lee, 2003]. In fact, the only studies that have reported annual contract bundling frequency in the thousands or tens of thousands annually were the Small Business Administration reports [Eagle Eye Publishers, 1997, 2000, 2002] which used quantitative methods and detected bundling by inference from changes in data detected by a computer program. The results of these studies have not been replicated by others.

ERROR DETECTION

One advantage of qualitative methodologies generally is their superior ability to detect conclusion validity errors in prior quantitative studies. This is demonstrated by the example of an error in the SBA’s contract bundling study’s [Eagle Eye Publishers, 2002] selection criteria that was detected and pointed out in Nerenz [2006]. The SBA study reported that 52% of its population of presumptively bundled contracts was made up of contract awarded to small businesses. By definition, the act of bundling renders the new bundled contract “unsuitable for small business” [Federal Register §13 CFR Part 125], so any contract which was won by a small business was not a bundled contract.

While such a significant error could, indeed did, go undetected in the SBA’s quantitative research process, it could not have survived the qualitative processes used to develop the Nerenz [2006] findings. In the first instance, there would be grounds for a small business to file a bid protest over contract bundling; if a business might have filed such a protest in error, it would have been dismissed by the GAO. If the GAO might have mistakenly allowed the case to go to decision, the case would have been discounted during case analysis in the dissertation process. Thus, three successive means of Type I error detection were imbedded in the construct of the dissertation’s qualitative design.

In each of the contract bundling bid protest cases, the plaintiffs were required to prove the existence of bundling during the procurement process being appealed. Their claims were investigated and validated by the appeals officer after a careful review of all the facts and evidence produced during the discovery process. Through direct observation and analysis by subject matter experts, each case of contract bundling reported through the GAO bid protest process was verified during the investigation and disposition of the case.
SINGLE CASE STUDY

In addition to the identification of the 52% small business proportion, the Nerenz dissertation pointed out that the SBA selection criteria for identifying a presumptively bundled contract deviated from the statutory definition of the act of contract bundling in every significant respect. The dissertation developed the theory that the error rate due to selection criteria construct would be at least 90% and that a 100% error rate was possible.

To test this theory, a single case study was conducted at the author’s own place of employment. The case study encompassed review of company bid and contract records, interviews with executives and contract specialists who had participated in prime contracts with the federal government. The SBA substitute definition for contract bundling that was used in its selection criteria was applied to prime contracts bid and/or won by the firm from 1990-2005. All of the contracts over the period qualified as “bundled” under the substitute definition used in the SBA study, while in fact, none of them was bundled.

The single case study produced the 100% error rate that was theorized, demonstrating the possibility that the error rate in the SBA population of contracts could be as high as 100%. The dissertation did not propose that the single case study results could be generalized to the population of contracts, the results can only be generalized to the theory of high possible error rates.

LIMITATIONS OF QUANTITATIVE RESEARCH

In the particular case of contract bundling research, the limits of quantitative research methodologies were known at the time of the SBA’s statistical studies. Bundling is a specific act that is defined by statute; it exhibits two defining characteristics: a) requirements combined were previously bought separately and b) the combined requirements make the new bundled contract unsuitable for small business [Federal Register §13 CFR Part 125].

Bundling researchers could not devise a practical way to test for these conditions in the computer programs that detected field code value changes in records within the Federal Procurement Data System: instead they substituted their own notion for bundling [Eagle Eye Publishers, 2002, pg.10]. Their decision to deviate from the accepted statutory definition for the practice was justified in the report's methodology section:

“It would be impossible with any reasonable amount of resources to do a government-wide study and to either (1) construct a genealogy of contracts so that contracts that were previously separate could be identified, or (2) make judgmental evaluations of contracts to identify all the contracts that had become unsuitable for small business” (Eagle Eye Publishers, 2002, pg. 54).

The obvious difficulty with this position is that it declares both of the defining characteristics of the act of bundling to be impossible to identify. There can be no assurance that the population of selected contracts is made up of actually bundled contracts if neither condition is to be tested in the protocol. The number of contracting actions records contained in the FPDS number into the tens of millions, so the difficulty expressed in the SBA report is not to be dismissed lightly, but it is difficulty only for a quantitative study as proposed and conducted.

By using bid protest case files to identify bundling actions, both the resource and judgmental evaluation problems found to be “impossible” in the SBA’s quantitative design were overcome in Nerenz [2006]. The small businesses that lost contracts to the practice of contract bundling would certainly know the genealogy of each contract bundled, and would certainly be able to identify each and every contract made unsuitable by the practice. Hundreds of thousands of businesspeople provide ample resources to assess every contract and each contracting action of the government.

Thus, in this specific case of contract bundling, the examination of individual case files from the bid protest process makes possible what was impossible for the SBA’s quantitative methodology - that is, to conduct a government-wide study that identified actual bundling actions as defined by the statute.

Using this qualitative approach produced a fundamentally different understanding of the frequency and effect of contract bundling than did the quantitative methodology used by SBA in their 2002 study. 34,221 bundling actions is a major public policy problem; 18 is a footnote.
ROLE OF PRACTITIONER / RESEARCHER

This specific case of contract bundling research illustrates a unique role that can be played by researchers who are also practitioners in the subject area of the research they conduct. In this case, new research into a small business issue was guided by over 30 years of business management experience by an executive of a small business.

The experience gained over years of practice provides the practitioner/researcher with an internal ‘reasonableness’ filter useful in avoiding problems of undetected conclusion validity errors. It also allows the researcher to rapidly adjust paths of inquiry as the discovery process identifies promising new avenues for gaining knowledge. These adjustments in pathways are often instinctive, and often result from the practitioner’s unique ability to recognize significance in a seemingly benign piece of information.

A good example of instinctive recognition in the Nerenz dissertation process is the 1999 Congressional testimony of an SBA official [Hayes, 1999] who stated that his agency had blocked 90% of the contract bundling actions brought to them for approval in FY1998. He later gave the number of thwarted bundling attempts as 54, meaning that six would have been approved to go forward.

This was not the central message of his statement; it was tangential to his major points. It is unlikely that another researcher seeking to quantify the number of bundling actions would review congressional testimony, even less likely that he/she would recognize the significance of this data bit as it was read.

However, in the hands of an experienced practitioner, this portion of testimony became a pivotal point in the development of the dissertation’s conceptual design. Knowing that anti-bundling regulations required the SBA to review and approve bundling plans, it was clear that for the SBA’s estimate of 3,287 new bundled contracts issued in FY1998 to be accurate, a nearly equal number of bid protests must exist, since all but six were issued improperly and would draw a GAO bid protest from one or more of the disenfranchised small businesses. Thus, the idea of counting bid protests to verify the SBA statistical estimates came to be the centerpiece of the research design.

Why didn’t anyone else think to verify the SBA bundling estimates by counting bid protest appeals? It is not very likely that anyone studying the problem would have had any direct experience with bid protests. Likewise, it is fairly rare for a business executive to seek out a doctoral degree in the latter years of his/her career and contract bundling is not a subject that many would choose for a dissertation. In the case of contract bundling research, the practical experience of the researcher was important in designing research that would adequately test the results from prior studies in novel ways, and provided confidence in the findings of new research that challenged the conventional wisdom on the subject.

IMPORTANCE OF THE RESEARCH

Whenever something is thought to be the number one problem in a particular field of academic interest, any new study that would provide credible contradictory findings would have to be considered important.

In the field of small business and entrepreneurship, contract bundling has long been believed to be the number one public policy issue for small business participating in the government contracting marketplace. The Nerenz [2006] dissertation suggests that both as a public policy concern and as a matter for small business strategists, the contract bundling is insignificant and undeserving of the resources allocated to confront it. The research suggests that resources can be re-allocated to issues which have a more significant adverse impact on small business development. The author not only presented an alternative understanding of the frequency and impact of the practice of contract bundling, it pointed out the specific cause of overstatement in prior studies [Eagle Eye Publishers, 2002]. Nerenz demonstrated the effect of the SBA’s flawed selection criteria by identifying prima facie evidence of Type I errors in the SBA’s own study findings.

SUMMARY

The conventional belief that the procurement practice of contract bundling is the number one problem for small businesses contracting with the U.S. federal government was challenged in the author’s 2006 doctoral dissertation entitled “Federal Government Procurement Policy Analysis: Has Extent and Effect of Contract Bundling On Small Business Been Overstated?”
The research studied bid protest cases filed with the U.S. Government Accountability Office by small business directly impacted by the practice from 1992-2004. It found only 25 cases, sharply contradicting the government’s estimate of 34,221 bundling actions and nearly 15,000 business ruined as a result of contract bundling from 1992-2001.

Differences in result can be largely attributed to methodological differences. While prior government studies used quantitative methods, the author used qualitative methods – principally the reliance on bid protest case files -- to develop its understanding of contract bundling frequency and impact on small business. The government’s quantitative estimates were shown to be materially overstated, and the specific cause was identified through analysis and case study techniques.

The Nerenz [2006] dissertation provides an example of how qualitative approaches – specifically case study methods – can be used to validate the findings and conclusions of quantitative studies. It also illustrates the potential for analysis of bid protest cases as a tool for evaluation of public policy and specific business research topics within the federal government contracting marketplace.

REFERENCES


